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CONTACT DUPLICATING AND RESEAU PRINTER

AND

HIGH RESOLUTION STEP AND REPEAT PRINTER

SEVENTH MONTHLY LETTER REPORT

November 10, 1965

Period: October 1, 1965 to November 1, 1965

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1.0 CONTACT DUPLICATING AND RESEAU PRINTER

1.1 Purpose

The over-all objective of the current contract is the design, fabrication, test and delivery in fifteen months of a Photographic, Step and Repeat, Contact Duplicating and Reseau Printer. Prime design goals are high-speed automatic operation, variable format capability, and high resolution with minimum film distortion or damage. The delivered equipment will be suitable for operational use. The printer will accommodate films of 70 mm to 9½" width with frame lengths up to 30 inches and will provide operation in the reseau mode and selective mode as options.

1.2 Activity of This Report Period

Printer fabrication and assembly is nearing completion. The exposure control lamp selection panel has been completed and installed. It utilizes an easel-type mask for manually setting the appropriate frame size and active lamp area. The panel also contains lamp test go-no-go switches and warning alarm controls in case of lamp failure.

The relay control chassis for printer sequence control is assembled and is in process of being wired. The chassis will mount in the printer lower left-hand drawer, which will open on slides for easy access for maintenance.

The remaining electronic components have been received for the automatic exposure control printed circuit boards and are being installed. Total machine wiring will be completed early next month and will permit full scale machine testing.

The frame edge detector circuit breadboard was modified and was once again tested in Washington with typical films provided by the technical monitors. The test data compiled indicated that there were no failures of the device to sense a single frame edge; however, some "false" frame edges were detected within the picture area. These made up approximately 10% of the frames tested and appeared whenever the density differences across the picture area were small, but approaching the maximum permissible densities for negatives or the minimum permissible densities for positives. As a result of the technical meeting, it was decided that: the sensing interval would be reduced; the capacitor delay circuit would be improved; and a reference detector and circuitry would be installed along the film edge to sense the base density. It is expected that these changes, when installed, will provide the greatest measure of reliability attainable.

The frame edge detector has been installed on the breadboard printer frame to aid in testing the transport mechanism. Preliminary results indicate the variation in positioning 18" frames

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to be in excess of ±½" with a 500 foot roll of 9½" negatives. Further adjustments and modifications should reduce this variation considerably.

The pre-view and punch station design and fabrication have been essentially completed and final assembly is in progress. Sample films for punch tests have been prepared by [redacted] and STA
TAT delivered to [redacted] to aid in final punch alignment.

The Operations Manual has been started. It is planned that the Operations Manual will be delivered with the printer and will explain operator controls and adjustments with some trouble shooting procedures. The maintenance manual will be prepared as a supplement following printer delivery in order to provide up-to-date schematics, wiring diagrams, parts lists and photographs.

Drawings of the machine installation base are being prepared and will be sent to the technical monitors early next month to facilitate installation at the facility.

1.3 Plans for Next Period

Wiring and assembly of the deliverable printer will be completed and final testing will be started. A date for the acceptance tests to be held at Salem will be established.

4 Problems

[redacted] STA

The Contracting Officer has been supplied with justification for change of contract scope resulting in a two-month extension of the delivery of the printer. Additional difficulties with the frame edge sensor circuitry are expected to delay printer delivery to late December 1965. Presently, all funds are expended and [redacted] is considering stopping work on this printer until increase in scope is resolved.

Verbal approval of the Test Plan was received by [redacted] on September 21, 1965; however, written approval has not been received as of this date.

1.5 Documentation

There was no new documentation this month.

1.6 Questions Outstanding

Typical films for exposure control testing were given to the technical monitor for comment.

2.0 HIGH RESOLUTION STEP AND REPEAT PRINTER

2.1 Purpose

The purpose of this effort is to design, fabricate, test and deliver in twenty months a high precision, step and repeat, photographic contact printer. This printer will be capable of producing photographic contact prints of the highest possible

quality, resolution and acutance from roll films of width varying from 70 mm to 9½" and in preselected frame lengths from 5 inches up to a maximum of 30 inches.

2.2 Activity of This Report Period

All activity has been stopped as of October 13, 1965, when a verbal stop work order was received at [redacted] from the Contracting Officer. STA

Prior to the stop work, layout design of all the major elements of the printer was essentially completed and detail drafting was nearing completion. Fabrication has already started on many items. Purchase of long lead parts had commenced for all assemblies and latest Pert run-offs indicated the Printer was essentially on schedule, based on the revised plan.

All drawings are presently being filed in the central vault by the Drafting Department and a status report of in-process design jobs is being prepared.

All vendors have been notified by the Purchasing Department and orders have been terminated or placed on hold.

Miscellaneous hardware-in-process, sub-assemblies and test fixtures are being collected, identified and stored in the laboratory. [redacted] requested a meeting be held to determine current status and possible future direction of the High Resolution Step and Repeat Printer. TAT

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2.3 Plans for Next Period

Meetings will be held with the Contracting Officer to determine future program direction.

2.4 Problems

Additional costs and delay of delivery of the printer are being incurred as a result of the stop work order. Project people have been reassigned to other tasks.

2.5 Documentation

A stop-work order was received from the Contracting Officer on October 13, 1965.

2.6 Questions Outstanding

Redirection of the program must be established.

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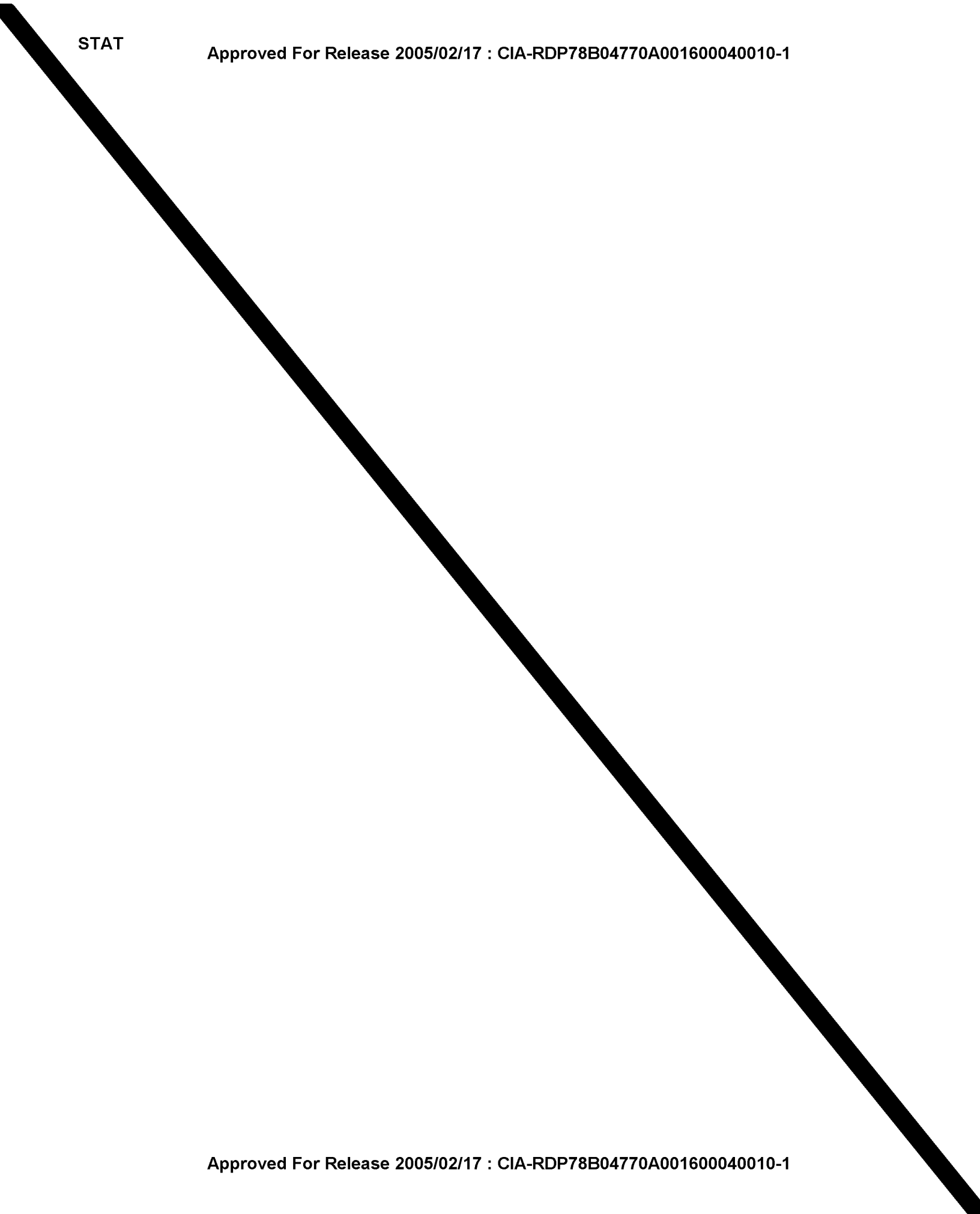

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